

# Education 2016 – 17 Programs of Study

Tennessee's Career and Technical Education (CTE) programs of study are meant to provide a relevant framework of industry-aligned, rigorous courses that progress a student in knowledge and skills year over year. They also provide invaluable opportunities for students to experience a subject they are passionate about and explore interests that could lead to postsecondary learning and future career paths. These sequenced courses also reflect and support the three credit "elective focus" requirement for graduation. Level one courses are most often taken by students in ninth grade; however, districts may make scheduling decisions that work best for their communities and students.

To become a concentrator in CTE and to fulfill the elective focus requirement, a student must earn three credits in a program of study or a career cluster. Courses in a career cluster include those listed as part of a program of study, as well as courses that are identified as cluster electives (listed, where applicable, at the end of each Career Cluster). Work-based learning (WBL) is seen as a valuable opportunity for all CTE students. The **Work-Based Learning: Career Practicum** course may substitute for the Level three or four offerings in all programs of study. For more information, please refer to the department of education's Work-Based Learning policy guide at: <a href="https://tn.gov/education/topic/work-based-learning">https://tn.gov/education/topic/work-based-learning</a>. Early postsecondary opportunities (EPSO), such as dualenrollment and dual-credit courses, are also a valuable opportunity for all students. The **dual enrollment course codes** may also substitute for the Level three or four offerings in any aligned career cluster's programs of study where those course codes represent postsecondary courses.

The *career exploration* course will be available to orient 8<sup>th</sup> and 9<sup>th</sup> grade students to high school, postsecondary, and career options and develop 21<sup>st</sup> century skills. This course can serve as a prerequisite for any CTE course and program of study; however, it is not a required part of any program of study and should not be counted toward CTE concentrator status.

For additional information about any courses or programs of study in the 16 Career Clusters, please reach out to the following career cluster consultants or visit our webpage at: <a href="https://tn.gov/education/topic/career-clusters">https://tn.gov/education/topic/career-clusters</a>.

Career Cluster	Consultant	Email	Phone
Advanced Manufacturing	Deborah Knoll	Deborah.Knoll@tn.gov	(615) 532-2844
Agriculture, Food, & Natural Resources	Steve Gass	Steven.Gass@tn.gov	(615) 532-2847
Architecture & Construction	Rachel Allen	Rachel.Allen@tn.gov	(615) 532-2835
Arts, Audio/Visual Technology, &	Rachel Allen	Rachel.Allen@tn.gov	(615) 532-2835
Communications			
Business Management & Administration	Anna Ogburn	Anna.Ogburn@tn.gov	(615) 532-2839
Education & Training	Elizabeth Rafferty	Elizabeth.Rafferty@tn.gov	(615) 532-2840
Finance	Anna Ogburn	Anna.Ogburn@tn.gov	(615) 532-2839
Government & Public Administration	Candi Norwood	Candi.Norwood@tn.gov	(615) 532-6248
Health Science	Candi Norwood	Candi.Norwood@tn.gov	(615) 532-6248
Hospitality & Tourism	Elizabeth Rafferty	Elizabeth.Rafferty@tn.gov	(615) 532-2840
Human Services	Elizabeth Rafferty	Elizabeth.Rafferty@tn.gov	(615) 532-2840
Information Technology	Deborah Knoll	Deborah.Knoll@tn.gov	(615) 532-2844
Law, Public Safety, Corrections, & Security	Candi Norwood	Candi.Norwood@tn.gov	(615) 532-6248
Marketing	Anna Ogburn	Anna.Ogburn@tn.gov	(615) 532-2839
Science, Technology, Engineering, &	Deborah Knoll	Deborah.Knoll@tn.gov	(615) 532-2844
Mathematics (STEM)			
Transportation, Distribution, & Logistics	Rachel Allen	Rachel.Allen@tn.gov	(615) 532-2835

## **Advanced Manufacturing**

Program of Study	Level 1	Level 2	Level 3	Level 4
Machining Technology	Principles of Manufacturing (5922)	Principles of Machining I (5929)	Principles of Machining II (5923)	Manufacturing Practicum (5926)
Electromechanical Technology	Principles of Manufacturing (5922)	Introduction to Electromechanical (6091)	Advanced Electromechanical Technology (6090)	Manufacturing Practicum (5926)
Mechatronics	Principles of Manufacturing (5922)	Digital Electronics (5925)	Mechatronics I <sup>1</sup> (6156)	Mechatronics II <sup>1</sup> (6157) -or- Manufacturing Practicum (5926)
Welding	Principles of Manufacturing (5922)	Welding I (6078)	Welding II <sup>2</sup> (6033)	Manufacturing Practicum (5926)

 $<sup>^{\</sup>rm 1}$  Local dual credit and/or dual enrollment opportunities exist for this course.

**Available courses for elective credit in this cluster:** *Project Lead the Way (PLTW)* courses aligned to manufacturing (see page 16 for list of courses), *Robotics & Automated Systems (6143), Work-Based Learning: Career Practicum (6105)*, advanced manufacturing dual enrollment courses (4059, 4060, 4061, 4062, and 4063)

<sup>&</sup>lt;sup>2</sup> May be taught for 1 or 2 credits.

## **Agriculture, Food, & Natural Resources**

Program of Study	Level 1	Level 2	Level 3	Level 4
Veterinary and Animal Science	Agriscience <sup>1</sup> (5957)	Small Animal Science (5958)	Large Animal Science (6116)	Veterinary Science <sup>1</sup> (5961) -and/or- Work-Based Learning (6105)
		Supervised Agricultur	al Experience (5964)	
Agricultural Engineering and Applied Technologies	Agriscience <sup>1</sup> (5957)	Principles of Agricultural Mechanics (5944)	Agricultural Power and Equipment (5945)	Agricultural and Biosystems Engineering <sup>4</sup> (5963)
		Supervised Agricultur	al Experience (5964)	
Agribusiness	Agriscience <sup>1</sup> (5957)	Principles of Agribusiness (5946)	Organizational Leadership and Communications <sup>4</sup> (5956)	Agricultural Business and Finance <sup>2,3</sup> (5943)
	Supervised Agricultural Experience (5964)			
Food Science	Agriscience <sup>1</sup> (5957)	Principles of Food Production (6118)	Food Science and Safety (6115)	Advanced Food Science (6113)
	Supervised Agricultural Experience (5964)			
Horticulture Science	Agriscience <sup>1</sup> (5957)	Principles of Plant Science and Hydroculture (6119)	Greenhouse Management <sup>3</sup> (5954)	Landscaping and Turf Science (5951)
		Supervised Agricultur	al Experience (5964)	
Environmental and Natural Resource Management	Agriscience <sup>1</sup> (5957)	Applied Environmental Science <sup>1</sup> (6114)	Plant and Soil Science <sup>4</sup> (5950)	Natural Resources Management (6117) -and/or- AP Environmental Science (3236)
		Supervised Agricultur	al Experience (5964)	

<sup>&</sup>lt;sup>1</sup> Satisfies one lab science credit required for graduation. <sup>2</sup> Satisfies ½ credit of personal finance required for graduation.

<sup>&</sup>lt;sup>3</sup> State approved dual credit course. <sup>4</sup> Local dual credit and/or dual enrollment opportunities exist for this course. **Available courses for elective credit in this cluster:** *Introduction to Geographic Information Systems (GIS) (6142), IGCSE Environmental Management (4254), AICE Environmental Management AS Level (4255), Work-Based Learning: Career Practicum (6105),* agriculture, food, & natural resources dual enrollment courses (4064, 4065, 4066, 4067, 4068, 4069, and 4070)

## **Architecture & Construction**

Program of Study	Level 1	Level 2	Level 3	Level 4
Residential & Commercial Construction	Fundamentals of Construction (6073)	Residential & Commercial Construction I (6162)	Residential & Commercial Construction II <sup>1</sup> (6163)	Construction Practicum (6160)
Structural Systems	Fundamentals of Construction (6073)	Structural Systems I (6164)	Structural Systems II <sup>1</sup> (6165)	Construction Practicum (6160)
Mechanical, Electrical, & Plumbing (MEP) Systems	Fundamentals of Construction (6073)	MEP Systems (6161)	HVAC (6077) -and/or- Electrical Systems (6075) -and/or- Plumbing Systems (6082)	Construction Practicum (6160)
Architectural & Engineering Design	Architectural & Engineering Design I (6037)	Architectural & Engineering Design II (6039)	Architectural & Engineering Design III <sup>1</sup> (5927)	Engineering Practicum (6141) -or- AP Calculus (3127, 3139, or 3128) -or- AP Physics (3238, 3239, 3234, or 3240)
Interior Design	Foundations of Interior Design (6014)	Residential Interior Design (6006)	Commercial Interior Design (6122)	Advanced Interior Design (6121)

<sup>&</sup>lt;sup>1</sup> May be taught for 1 or 2 credits.

**Available courses for elective credit in this cluster:** *Introduction to Geographic Information Systems (GIS) (6142), Welding I (6078), Work-Based Learning: Career Practicum (6105)*, architecture & construction dual enrollment courses (4071, 4072, 4073, 4074, 4075, and 4076)

## Arts, Audio/Visual Technology, & Communications

Program of Study	Level 1	Level 2	Level 3	Level 4
Digital Arts & Design	Digital Arts & Design I (6084)	Digital Arts & Design II (6086)	Digital Arts & Design III (6087)	Applied Arts Practicum (6158) -and/or- AP Studio Art: 2-D Design (3545)
Audio/Visual Production	A/V Production I (6049)	A/V Production II (6050)	A/V Production III (6083)	Applied Arts Practicum (6158) -and/or- AP English Language and Composition (3013)
Fashion Design	Visual Art I (3501)	Foundations of Fashion Design (6120)	Fashion Design (6008)	Advanced Fashion Design (6009)

#### Available courses for elective credit in this cluster:

- In Audio/Visual Production POS: Journalism (3008),
- In Fashion Design POS: IGCSE Art and Design: Textile Design (4241), AICE Art and Design: Textile Design AS Level (4242), AICE Art and Design: Textile Design A Level (4243), AICE Art and Design: Fashion & Design AS Level (4244), AICE Art and Design: Textiles AS Level (4245)
- In all programs of study: *Work-Based Learning: Career Practicum (6105)*, arts, audio/visual technology, & communications dual enrollment courses (4077, 4078, 4079, and 4080)

## **Business Management & Administration**

Program of Study	Level 1	Level 2	Level 3	Level 4
Business Management	Introduction to Business & Marketing (5905)	Business Communications (5888) -and/or- Accounting I (5910)	Business Management (5889)	Business & Entrepreneurship Practicum (6159) -and/or- Virtual Enterprise International <sup>1</sup> (5900)
Office Management	Computer Applications (5891)	Business Communications (5888)	Business Management (5889)	Advanced Computer Applications (5904)
Health Services Administration	Introduction to Business & Marketing (5905)	Health Science Education (5998)	Health Information Technology (5997)	Business & Entrepreneurship Practicum (6159) -and/or- Virtual Enterprise International <sup>1</sup> (5900)

<sup>&</sup>lt;sup>1</sup> Satisfies ½ credit of Economics required for graduation.

**Available courses for elective credit in this cluster:** *American Business Legal Systems (5892), Business Economics (5898), IGCSE Business Studies (4259), AICE Business Studies 1 AS Level (4260), AICE Business Studies 2 A Level (4261), Work-Based Learning: Career Practicum (6105), business management & administration dual enrollment courses (4081, 4082, 4083, and 4084)* 

# **Education & Training**

Program of Study	Level 1	Level 2	Level 3	Level 4
Teaching as a Profession (K-12)	Fundamentals of Education (6123)	Teaching as a Profession I (6010)	Teaching as a Profession II (6125)	Teaching as a Profession III (6126)
Early Childhood Education (Pre-K-4)	Fundamentals of Education (6123)	Early Childhood Education Careers II (6016)	Teaching as a Profession II (6125)	Teaching as a Profession III (6126)
Educational Support Careers	Fundamentals of Education (6123)	Teaching as a Profession I (6010)	School Counseling (6124)	Teaching as a Profession III (6126)

**Available courses for elective credit in this cluster:** *Lifespan Development (6013), Work-Based Learning: Career Practicum (6105)*, education & training dual enrollment courses (4085, 4086, 4087, and 4088)

## **Finance**

Program of Study	Level 1	Level 2	Level 3	Level 4
Accounting	Introduction to Business & Marketing (5905)	Accounting I (5910)	Accounting II (5911)	Statistics (3136) -or- AP Statistics (3129)
Banking and Finance	Introduction to Business & Marketing (5905)	Accounting I (5910)	Banking and Finance (5899)	Financial Planning (5890)

**Available courses for elective credit in this cluster:** *Personal Finance (5901), Work-Based Learning: Career Practicum (6105), IGCSE Accounting (4238), AICE Accounting 1 AS Level (4239), AICE Accounting 2 A Level (4240),* finance dual enrollment courses (4089, 4090, and 4091)

## **Government & Public Administration**

Program of Study	Level 1	Level 2	Level 3	Level 4
Public	Principles of Public	Public Management	U.S. Government	Public Law and
Management and	Service	and Administration	and Civics <sup>1</sup>	Budgeting
Administration	(6127)	(6129)	(3407)	(6128)

 $<sup>^{\</sup>rm 1}$  Satisfies ½ credit of U.S. Government required for graduation.

**Available courses for elective credit in this cluster:** *Court Systems and Practices (6150), Work-Based Learning: Career Practicum (6105)*, government & public administration dual enrollment courses (4092 and 4093)

#### **Health Science**

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Program of Study	Level 1	Level 2	Level 3	Level 4
Biotechnology Research	Health Science Education (5998)	Diagnostic Medicine (5994)	Anatomy and Physiology <sup>2</sup> (3251 or 5991)	Biomedical Applications <sup>2</sup> (5992) -and/or- Forensic Science <sup>2</sup> (5996)
Public Health	Health Science Education (optional) (5998)	Emergency Preparedness (6151)	Behavioral and Community Health (6130)	Global Health and Epidemiology (6132)
Diagnostic Services	Health Science Education (5998)	Diagnostic Medicine (5994)	Anatomy and Physiology <sup>2</sup> (3251 or 5991) -and/or- Medical Terminology <sup>1</sup> (5883)	Cardiovascular Services (6131) -and/or- Clinical Internship (5993)
Health Informatics	Health Science Education (5998)	Medical Terminology <sup>1</sup> (5883)	Health Information Technology (5997)	Clinical Internship (5993)
Therapeutic Nursing Services	Health Science Education (5998)	Medical Therapeutics (5999)	Anatomy and Physiology <sup>2</sup> (3251 or 5991) -and/or- Medical Terminology <sup>1</sup> (5883)	Nursing Education (6000)
Emergency Services	Health Science Education (5998)	Emergency Preparedness (6151)	Anatomy and Physiology <sup>2</sup> (3251 or 5991) -and/or- Medical Terminology <sup>1</sup> (5883)	Emergency Medical Services <sup>1</sup> (5995)
Therapeutic Clinical Services	Health Science Education (5998)	Medical Therapeutics (5999)	Rehabilitation Careers (5990) -or- Dental Science (6134) -or- Pharmacological Science (6133) -or- Nutrition Science and Diet Therapy <sup>2</sup> (6007)	Anatomy and Physiology <sup>2</sup> (3251 or 5991) -and/or- Clinical Internship (5993)
Clinical Exercise Physiology	Health Science Education (5998)	Rehabilitation Careers (5990)	Exercise Science (6170)	Anatomy and Physiology <sup>2</sup> (3251 or 5991) -and/or- Clinical Internship (5993)

<sup>&</sup>lt;sup>1</sup> Local dual credit and/or dual enrollment opportunities exist for this course. <sup>2</sup> Satisfies one lab science credit for graduation.

**Available courses for elective credit in this cluster:** *Work-Based Learning: Career Practicum (6105)*, health science dual enrollment courses (4094, 4095, 4096, 4097, 4098, 4099, 4100, 4101, and 4102)

## **Hospitality & Tourism**

Program of Study	Level 1	Level 2	Level 3	Level 4
Culinary Arts	Culinary Arts I	Culinary Arts II	Culinary Arts III	Culinary Arts IV
	(5979)	(5980)	(5981)	(6167)
Hospitality and	Hospitality &	Hospitality	Hospitality	Event Planning & Management (6168) -or- Advertising and Public Relations (5936)
Tourism	Tourism Exploration	Marketing	Management	
Management	(5933)	(6169)	(5940)	

**Available courses for elective credit in this cluster:** *IGCSE Travel and Tourism (4262), AICE Travel and Tourism 1 AS Level (4263), AICE Travel and Tourism 2 A Level (4264), Work-Based Learning: Career Practicum (6105),* hospitality & tourism dual enrollment courses (4103, 4104, and 4105)

#### **Human Services**

Program of Study	Level 1	Level 2	Level 3	Level 4
Childhood Development Services	Early Childhood Education Careers I (6015)	Early Childhood Education Careers II (6016)	Early Childhood Education Careers III (6017)	Early Childhood Education Careers IV (6135)
Social Health Services	Introduction to Human Studies (6137)	Lifespan Development (6013)	Family Studies (6136)	Human Services Practicum (6138) -and/or- Psychology (3433) -and/or- Sociology (3432)
Dietetics and Nutrition	Introduction to Human Studies (6137)	Nutrition Across the Lifespan (6005)	Nutrition Science and Diet Therapy <sup>2</sup> (6007)	Human Services Practicum (6138) -and/or- Psychology (3433) -and/or- Sociology (3432)
Cosmetology	Principles of Cosmetology (5983)	Design Principles of Cosmetology (5986)	Chemistry of Cosmetology (5984)	Entrepreneurship <sup>1</sup> (5934)
Barbering	Barbering I (5972)	Barbering II (5973)	Barbering III (5974)	Entrepreneurship <sup>1</sup> (5934)

<sup>&</sup>lt;sup>1</sup> Satisfies ½ credit of Economics required for graduation.

Available courses for elective credit in this cluster: Work-Based Learning: Career Practicum (6105), IGCSE Child Development (4237), AICE Food Studies 1 A Level (4256), AICE Food Studies 2 A Level (4257), IGCSE Food & Nutrition (4258), human services dual enrollment courses (4106, 4107, 4108, 4109, 4110, and 4111)

<sup>&</sup>lt;sup>2</sup> Satisfies one lab science credit required for graduation.

## **Information Technology**

Program of Study	Level 1	Level 2	Level 3	Level 4
Programming & Software Development	Information Technology Foundations (6095)	Programming and Logic I (6098)	Programming and Logic II (6099)	Programming & Software Development Practicum (5908) -and/or- AP Computer Science (3635)
Networking Systems	Information Technology Foundations (6095)	Computer Systems Networking (6094) (6097)		Cabling and Internetworking (6093) -and/or- IT Clinical Internship (6096)
Web Design	Information Technology Foundations (6095)	Web Design Foundations (6100)	Web Site Development (6102)	Web Design Practicum (6171)

**Available courses for elective credit in this cluster:** *Introduction to Geographic Information Systems (GIS) (6142), IGCSE Computer Studies (4246), AICE Computing 1 AS Level (4247), AICE Computing 2 A Level (4248), AICE Applied ICT 1 AS Level (4249), AICE Applied ICT 2 A Level (4250), Work-Based Learning: Career Practicum (6105),* information technology dual enrollment courses (4112, 4113, 4114, and 4115)

## Law, Public Safety, Corrections, & Security

Program of Study	Level 1	Level 2	Level 3	Level 4
Law Enforcement Services	Principles of Law, Corrections, and Security (6155)	Criminal Justice I (5987)	Criminal Justice II (5988)	Criminal Justice III: Investigation (5989)
Fire Management Services	Principles of Fire and Emergency Services (6154)	Emergency Preparedness (6151)	Fire Science I (6152)	Fire Science II (6153) -and/or- Emergency Medical Services <sup>2</sup> (5995)
Legal and Correction Services	Principles of Law, Corrections, and Security (6155)	Criminal Justice I (5987)	U.S. Government and Civics <sup>1</sup> (3417)	Court Systems and Practices (6150)

<sup>&</sup>lt;sup>1</sup> Satisfies ½ credit of U.S. Government required for graduation.

**Available courses for elective credit in this cluster:** *American Business Legal Systems (5892), Work-Based Learning: Career Practicum (6105)*, law, public safety, corrections, & security dual enrollment courses (4116, 4117, 4118, and 4119)

<sup>&</sup>lt;sup>2</sup> Local dual credit and/or dual enrollment opportunities exist for this course.

## Marketing

Program of Study	Level 1	Level 2	Level 3	Level 4
Marketing Management	Introduction to Business & Marketing (5905)	Marketing and Management I: Principles <sup>1</sup> (5931)	Marketing and Management II: Advanced Strategies (5932)	Advertising and Public Relations (5936) -or- Retail Operations (5938) -or- Event Planning & Management (6168)
Entrepreneurship	Introduction to Business & Marketing (5905)	Marketing and Management I: Principles <sup>1</sup> (5931)	Entrepreneurship <sup>1</sup> (5934)	Business & Entrepreneurship Practicum (6159) -or- Virtual Enterprise International <sup>1</sup> (5900)

<sup>&</sup>lt;sup>1</sup> Satisfies ½ credit of Economics required for graduation.

**Available courses for elective credit in this cluster:** *Business Communications (5888), Work-Based Learning: Career Practicum (6105)*, Marketing dual enrollment courses (4120, 4121, and 4122)

#### **STEM**

Program of Study	Level 1	Level 2	Level 3	Level 4
Engineering	Principles of Engineering and Technology (5924)	Engineering Design I (6139)	Engineering Design II (6140)	Engineering Practicum (6141) -and/or- AP Physics (3238, 3239, 3234, or 3240)
Technology	Principles of Engineering and Technology (5924)	Digital Electronics (5925)	Robotics & Automated Systems (6143)	Engineering Practicum (6141) -and/or- AP Physics (3238, 3239, 3234, or 3240)
STEM Education	STEM I: Foundation (6144)	STEM II: Applications (6145)	STEM III: STEM in Context (6146)	STEM IV: STEM Practicum (6147)
Project Lead the Way	Introduction to Engineering (PLTW) (6054)	Principles of Engineering (PLTW) (6052)	Choice of the following: Aerospace Engineering (PLTW) (6057) Civil Engineering & Architecture (PLTW) (6056) Biotechnical Engineering (PLTW) (6058) Digital Electronics (PLTW) (6053) Computer Integrated Manufacturing (PLTW) (6055)	Engineering Design and Development (PLTW) (6059)
Engineering by Design	Foundations of Technology (EBD) (5917)	Technological Design (EBD) (5885)	Advanced Design Applications (EBD) (5920) -and/or- Advanced Technological Applications (EBD) (5919)	Engineering Design (EBD) (5921)

Note: Courses marked (EBD) are part of the *Engineering by Design* curriculum package and may require additional costs and training to implement. Courses marked (PLTW) are part of the *Project Lead the Way* curriculum package and may require additional costs and training to implement.

Available courses for elective credit in this cluster: Introduction to Geographic Information Systems (GIS) (6142), Principles of Technology I (5886), Principles of Technology II (5887), IGCSE Design and Technology (4251), AICE Design & Technology 1 AS Level (4252), AICE Design & Technology 2 A Level (4253), Work-Based Learning: Career Practicum (6105), STEM dual enrollment courses (4123, 4124, 4125, and 4126)

## **Transportation, Distribution, & Logistics**

Program of Study	Level 1	Level 2	Level 3	Level 4
Automotive Maintenance and Light Repair	Maintenance and Light Repair I (5879)	Maintenance and Light Repair II (5880)	Maintenance and Light Repair III (5881)	Maintenance and Light Repair IV (5882)
Automotive Collision Repair	Introduction to Collision Repair (6172)	Collision Repair: Non-Structural <sup>1</sup> (6062) -or- Collision Repair: Painting & Refinishing <sup>1</sup> (6063)	Collision Repair: Non-Structural <sup>1</sup> (6062) -or- Collision Repair: Painting & Refinishing <sup>1</sup> (6063)	Collision Repair: Non-Structural¹ (6062) -or- Collision Repair: Painting & Refinishing¹ (6063) -or- Collision Repair: Damage Analysis, Estimating, & Customer Service (6149)
Aviation Flight	Introduction to Aerospace (6068)	Aviation I: Principles of Flight (6070)	Aviation II: Advanced Flight (6148)	
Distribution and Logistics	Foundations of Transportation, Distribution, and Logistics (6069)	Distribution and Logistics I (6072)	Distribution and Logistics II: Management (6024)	

<sup>&</sup>lt;sup>1</sup> May be taught for up to 3 credits. Implementation options vary; contact the career cluster consultant for more information.

**Available courses for elective credit in this cluster:** *Welding I (6078), Welding II (6033), Work-Based Learning: Career Practicum (6105),* transportation, distribution, & logistics dual enrollment courses (4127, 4128, 4129, 4130, 4131, 4132, 4133, and 4134. *Collision Repair: Structural (6064)* may be taken at a participating postsecondary institution as a third- or fourth-level course.

## **Middle School**

Career Cluster(s)	6 <sup>th</sup> Grade	7 <sup>th</sup> Grade	8 <sup>th</sup> Grade
Agriculture, Food, & Natural Resources		Introduction to Agricultural Sciences (0885)	Introduction to Agricultural Sciences (0885) Career Exploration* (6166)
<ul> <li>Arts, A/V Technology, &amp; Communications</li> <li>Business Management &amp; Administration</li> <li>Finance</li> <li>Information Technology</li> <li>Marketing</li> </ul>	Keyboarding <sup>1</sup> (0610)	Keyboarding (0710)	Keyboarding (0810) Computer Applications (5891 or 3638) Career Exploration* (6166)
<ul><li>Education &amp; Training</li><li>Human Services</li></ul>	Introduction to Social Health <sup>2</sup> (0562)	Introduction to Social Health (0562)	Introduction to Social Health (0562) Career Exploration* (6166)
<ul> <li>Advanced Manufacturing</li> <li>Architecture &amp; Construction</li> <li>STEM</li> <li>Transportation, Distribution, &amp; Logistics</li> </ul>	Exploring Technology (EBD) (6047)	Inventions and Innovations (EBD) (0782)	Technological Systems (EBD) (0882) Career Exploration* (6166)
<ul> <li>Advanced Manufacturing</li> <li>Architecture &amp; Construction</li> <li>Information Technology</li> <li>STEM</li> <li>Transportation, Distribution, &amp; Logistics</li> </ul>	STEM Explorers (0649)	STEM Innovators (0749)	STEM Designers (0849) Career Exploration* (6166)
Health Science		Introduction to Health Science (0837)	Introduction to Health Science (0837) Medical Detectives (PLTW) (0890) Career Exploration* (6166)
<ul> <li>Advanced Manufacturing</li> <li>Architecture &amp; Construction</li> <li>Arts, A/V Technology, &amp; Communications</li> <li>Information Technology</li> <li>STEM</li> </ul>	Design and Modeling (PLTW) (0783)	Automation and Robotics (PLTW) (0883)	Energy and the Environment (PLTW) (0886) Flight and Space (PLTW) (0887) Green Architecture (PLTW)

Transportation, Distribution, & Logistics		(0888) Magic of Electrons (PLTW) (0889) Science and Technology (PLTW) (0891) Career Exploration* (6166)
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<sup>&</sup>lt;sup>1</sup> Keyboarding may also be used with 4<sup>th</sup> and 5<sup>th</sup> grade students (0410, 0510).

Note: Courses marked (EBD) are part of the *Engineering by Design* curriculum package and may require additional costs and training to implement. Courses marked (PLTW) are part of the *Project Lead the Way* curriculum package and may require additional costs and training to implement.

\*The *Career Exploration* course will be available to orient 8<sup>th</sup> and 9<sup>th</sup> grade students to high school, postsecondary, and career options and develop 21<sup>st</sup> century skills. This course can serve as a prerequisite for any CTE course and program of study; however it is not a required part of any program of study and should not be counted toward CTE concentrator status.

<sup>&</sup>lt;sup>2</sup> Introduction to Social Health may also be used with 5th grade students (0562).